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Gendered trends in poverty in the post-apartheid period, 1997 - 2006

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Abstract

This study investigates whether trends in the extent, depth and severity of poverty in South Africa over the past decade have been gendered. We examine first whether females are more likely to live in poor households than males, and whether this has changed over time; and, second, how poverty has changed among female-headed and male-headed households. We use data provided by the 1997 and 1999 rounds of the October Household Survey and the 2004 and 2006 rounds of the General Household Survey. These surveys have the advantage of collecting information on the individual receipt of social grant income. We test whether our findings on gendered trends in poverty are robust to different poverty lines, to the possible underestimation of household income and to adjustments for household composition.

1 Introduction

Poverty studies from a number of countries and regions, spurred on by the United Nations Development Programme's (1995) claim that 70 per cent of the world's poor are women, have investigated gendered trends in poverty over the past decade. In South Africa, amidst an ongoing debate over the nature of trends in overall poverty since the end of apartheid, several studies have either hypothesised (cf. Phalane 2002; Bentley 2004; Bhorat *et al.* 2006; Thurlow 2006) or offered preliminary evidence of (Bhorat & van der Westhuizen 2008) a 'feminisation' of income poverty. Research has also documented a rise in female headship over the period (Bhorat *et al.* 2006), with female-headed households being over-represented among the poor (Posel 1997; Leibbrandt & Woolard 2001; Armstrong *et al.* 2008; Bhorat & van der Westhuizen 2008). Against this backdrop, several authors have suggested that post-apartheid economic policy may not have been successful in redressing gender differences in the burden of poverty (Taylor 1997; Phalane 2002; Thurlow 2006).

To date, however, there has been no comprehensive study of gendered poverty trends in the post-apartheid period. This may be explained partly by the limited availability of comparable surveys, conducted at regular intervals, which collect comprehensive information on household income or expenditure. In this paper, we analyse the income and expenditure data provided in two sets of nationally representative household surveys, which have been relatively under-utilised in poverty studies thus far: the 1997 and 1999 October Household Surveys and the 2004 and 2006 General Household Surveys. Although these surveys do not capture all sources of income received in households, they do consistently collect information on the individual receipt of both earned income and social grant income. We use these data to investigate whether trends in the extent, depth and severity of poverty in South Africa over the past decade have been gendered. We also test the robustness of our findings to different specifications of the poverty threshold, to the possible underestimation of household income and to adjustments for household composition.

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The paper is structured as follows. The next section summarises the existing body of literature on gender and poverty in South Africa. Section 3 discusses the data and methods that we use to investigate gendered trends in poverty. In Section 4 we present estimates of poverty trends by gender over the post-apartheid period and in Section 5 we evaluate the robustness of these trends. Section 6 concludes with a summary of the estimated changes in gendered poverty rates during the post-apartheid period.

2 Review

The post-apartheid period has brought a number of developments which are likely to have increased women's access to resources. Since 1995, for example: women's share of employment has grown (Casale & Posel 2002, 2005); the social security system has been expanded to include support for pensioners and the caregivers of children across all race groups; and progressive labour legislation, which includes the extension of minimum wages for domestic workers, has been introduced.[1] Despite these positive developments, there are other changes which suggest that women's relative access to resources may have worsened over the period. Gender analysts point to the disproportionate effects of the HIV/AIDS epidemic on women (Bentley 2004; Schatz & Ogunmefun 2007; Shisana *et al.* 2010), rising rates of unemployment among women (Casale & Posel 2002; Casale 2004), and a widening gender gap in real earned income (Leibbrandt *et al.* 2005) together with the increasing proportion of informal and low-income workers who are women (Casale 2004).

The literature on poverty in post-apartheid South Africa has paid little attention to the gendered nature of poverty. Rather, studies have focused on measuring aggregate trends in poverty and, given the legacy of apartheid, on changes disaggregated by race. Research suggests that until about 2000, income poverty rates remained relatively unchanged or even increased (Leibbrandt & Woolard 2001; Bhorat & Kanbur 2005; Hoogeveen & Özler 2006; Leibbrandt *et al.* 2006; Seekings 2007; Bhorat & van der Westhuizen 2008; van der Berg *et al.* 2008; Yu 2010). After 2000, and particularly in the period (post 2001) when government spending[2] on social grants increased and the take-up of the child support grant expanded, studies identify that poverty rates began to fall (Meth 2006; Bhorat & van der Westhuizen 2008; van der Berg *et al.* 2008; Yu 2010). There remains some disagreement however over the extent of this decline in poverty (Meth 2006; Seekings 2007; van der Berg *et al.* 2008).

One of the key problems with measuring changes in poverty in the post-apartheid period is that comparable and comprehensive income or expenditure data have not been collected at regular intervals. The Population Censuses (1996 and 2001), conducted at long intervals, capture income in (inconsistent) bands and have been plagued by large numbers of zero-income households (Leibbrandt & Woolard 2001). The Income and Expenditure Surveys (1995, 2000 and 2005) are also conducted at long intervals and changes in the survey methodologies[3] between survey years compromise comparisons of the data .(Statistics South Africa 2008; van der Berg *et al.* 2008). The Labour Force Surveys (undertaken bi-annually from 2000 to 2007) provide a more regular source of data, but these surveys collect information on the individual receipt only of *earned* income.

Measuring gendered changes in poverty brings the added difficulty of how to assign income across individuals in a household. In generating conventional estimates of income poverty, it is

[1] The 1997 Basic Conditions of Employment Act provided protection against unfair dismissal and enforced a minimum wage. The 1998 Employment Equity Act promotes the employment of both women and non-Whites across all sectors.

[2] Government expenditure on social grants increased in the post-2000 period (starting in 2001-2) with the proportion of GDP spent on social grants rising from about two per cent in 1994 to 3.5 per cent in 2005 (Seekings 2007).

[3] The 2005 Income and Expenditure Survey uses a diary method to capture information on household expenditures over the previous four weeks. In order to employ this new methodology, field workers visit each household five times over a four-week period and leave an expenditure (or acquisition) diary with respondents over this period. This approach differs significantly from past surveys (1995 and 2000) where respondents were asked to recall their expenditures over the most recent four-week period.

assumed that all household resources are equally shared among household members (or among adult equivalents). An individual is identified as being poor if he or she lives in a household in which average per capita (or per adult equivalent) income is below a poverty threshold. However, where resources are not equally shared among household members, then these poverty measures may conceal a gendered distribution of poverty within households. To explore the gendered nature of poverty further, studies from both developed and developing countries compare the economic well-being of female and male-headed households. If household heads are the primary income earners in households, then an analysis of poverty based on the gender of the household head highlights the nature and implications of gender differences in access to resources.

The poverty literature, particularly in developing countries, suggests that female-headed households are often more vulnerable to poverty. Out of 61 studies investigating the association between poverty and female-headed households in developing countries, summarised in Buvinic and Gupta (1997), 38 studies found that female-headed households were over-represented among poor households; 15 identified that poverty was associated with certain types of female-headed households or that, with certain types of poverty measures, a statistically significant relationship was found; and only eight studies reported no association between female headship and poverty. Similarly, in the World Bank's poverty assessments, poverty was higher for female-headed households than for male-headed households in 25 out of 58 countries. In a further 10 countries, certain types of female-headed households were poorer than male-headed households (Lampietti & Stalker 2000).

Several South African studies have demonstrated that female-headed households are relatively disadvantaged in terms of income (Budlender 1997; Posel 2001) or are over-represented among the poor (Ray 2000; Leibbrandt & Woolard 2001; Bhorat & van der Westhuizen 2008). However, there has been little research that has investigated how the relative well-being of female-headed households has changed over time. The one exception is a study by Bhorat and van der Westhuizen (2008), which uses expenditure data from the 1995 and 2005 Income and Expenditure Surveys. The study finds that although poverty incidence fell among both female and male-headed households, female-headed households became relatively more vulnerable to poverty over the period.[4]

3 Data and methods

In this paper we investigate gendered poverty trends in post-apartheid South Africa in two ways. First, we examine how poverty rates among females and males have changed over the period. Second, we estimate whether the economic well-being of female-headed households, relative to male-headed households, has changed.

We make use of data sources that have been under-utilised in analyses of poverty in the post-apartheid period. These include the 1997 and 1999 rounds of the October Household Survey (OHS) and the 2004 and 2006 rounds of the General Household Survey (GHS). Each of these surveys collects detailed information on earned income and, importantly, also on the individual receipt of social grants. Moreover, the questions used to declare income and expenditure are similar across the OHSs and GHSs. In both the OHSs and the GHSs, the income module captures information on individual's total pay/salary from their main job before deductions.[5] Respondents are asked to give point estimates for earned income, but, if unable to do so, are prompted to select from income

[4] The incidence of poverty among female-headed households decreased significantly from about 65.6 per cent to 60.6 per cent over the ten-year period. However, poverty rates among male-headed households declined from 45.8 per cent to 38.3 per cent, representing a greater absolute and relative fall. At the individual level, Bhorat and van der Westhuizen (2008) find that the proportion of poor individuals living in female-headed households increased from 42.3 per cent in 1995 to 54.8 in 2005.

[5] One difference in the way that income is captured in the OHSs and GHSs is that the OHSs include a separate section for total income/turnover from self-employment or own activities. In the GHSs, all forms of income are captured in the same section – but only after all types of work activities are recorded in an earlier section (e.g. section 2.1 in the 2004 GHS).

bands. Nominal income bands are constant across the OHSs and GHSs. Where point estimates are not available and income is reported in bands, we take the midpoint of the reported income bracket.[6]

While information on earned income from an individual's main job or activity is comparable in the OHSs and the GHSs, there are some important differences in the way that these surveys capture income data. First, among the four data sets used to analyse poverty in this paper, the 1997 OHS is the only survey that collects comprehensive information on the value of income received from a wide variety of sources.[7] The 1999 OHS and the GHSs only record whether or not individuals received income from some of these sources and do not capture actual values. In order to generate comparable estimates of income over time, income derived from these additional sources that are captured in the 1997 OHS are excluded from the poverty analysis. This approach allows for the construction of comparable estimates of access to earned income across all four data sources.

Second, while all the surveys capture individual access to social grants, in the 1999 OHS and in the GHSs information on social grant receipt is collected only as a binary variable. Only the 1997 OHS asks respondents to report the annual value of social grant income. For consistency across all the surveys, we derive a measure for social grant income in each survey by assigning the maximum value of the particular social grant to the grant recipient.[8] In using this approach to measure social grant income, our estimates of the extent of social grant spending are largely comparable to those documented in official administrative records.[9] Estimates from the 2004 GHS, for example, place the total annual value of social grants at approximately R43 billion. National Treasury (2007) records show that the Department of Social Development spent a total of R44.8 billion on all social grants for the 2004/5 fiscal year. According to the 2006 GHS, total annual social grant spending is estimated at about R51.5 billion. In comparison, official records document spending at approximately R51.9 billion for the 2005/6 fiscal year and R56.9 billion in 2006/7 fiscal year (National Treasury 2007).

One of the advantages of the household survey data used in this study is that we can isolate the relative contributions of social grant income to household resources, *ceteris paribus*, and evaluate the poverty-reducing effects of these transfers. Nonetheless, several problems remain. First, none of the surveys collects comprehensive information on private pensions. As a result, many of the elderly, living in households where neither social grants nor earned income is reported, for example, would be incorrectly identified as being in poverty. Second, only the 1997 OHS collects information on the value of remittances and private maintenance, income sources that are more likely to be important for low-income households and for female-headed households (Leibbrandt & Woolard 1999).

In Table 1, the first two data rows describe the number and percentage of households for which no earnings or social grants are reported in the datasets which we analyse.[10] Although there is a considerable decline in these "zero-income" households across the years, almost 15 percent of all households in the GHS 2006 still report receiving neither earnings from employment nor grant income. To address this problem, we use information on household expenditure to augment household income in "zero-income" households.[11]

[6] Observations with no income information at all, those with an absolute figure but no pay-period information, with no income category information, or answered 'don't know' or 'refuse' were set to missing. Roughly five per cent of the employed in the 1997 OHS and about six per cent of the employed in the 2006 GHS were assigned missing values for income.

[7] These additional sources of income that are captured in the 1997 OHS, but not the 1999 OHS or the GHSs, include: private pensions, investments, private maintenance, gratuities, remittances and other sources.

[8] The only way to ensure that social income data is measured consistently across the OHSs and the GHSs is to assume that the maximum value of the grant (as specified by the South African Social Security Agency) is awarded to each individual.

[9] While overall spending on social grants captured through household surveys is in line with administrative records, there is a weaker correspondence in the composition of grants. For example, household survey data over-estimate the receipt of the social pension and considerably underestimate the receipt of the disability grant.

[10] The income measure used in this table is comparable across all four data sets (i.e. the additional sources of income are not included for the 1997 OHS).

[11] The 1997 OHS captures household expenditure as a point value while the other surveys collect expenditure information in bands. Where expenditure is captured in bands, we assign the midpoint of the expenditure bracket to households that report zero earnings and zero social grant income. Most households with zero income did not report

Although household expenditure is captured only through a single question, and is therefore a relatively crude measure of economic status, it offers the means to approximate income, and particularly poverty status, in households which do not report earnings or grant income. Table 1 shows that using expenditure as a proxy for income in households reduces the percentage of zero-income households to 1.9 percent in the 1997 OHS. In the following years, the percentage of zero-income households is reduced to 3.95 per cent, 1.34 per cent and 0.60 per cent of all households, respectively.[12]

In the poverty analysis, we estimate the overall incidence, depth and severity of poverty and look specifically at how these have changed by gender and across female- and male-headed households over the specified period. The headcount and poverty gap ratios are measured using the normalised Foster-Greer-Thorbecke (FGT) index (Foster *et al.* 1984):

$$P_\alpha = 1/n \sum_{i=1}^{m} [(z - y_i)/z]^\alpha \quad (1)$$

where n represents the population size, m is the number of people falling below the poverty line z, and y_i represents the average per capita monthly household income of individual i. The FGT index identifies the headcount or poverty rate when α takes the value of zero, the depth of poverty when α equals one, and the severity[13] of poverty when α equals two. We follow Hoogeveen and Özler (2005) in selecting R322 per capita monthly household income (in 2000 prices)[14] as a plausible lower-bound poverty threshold for South African households. This also allows for comparability with a number of other poverty studies that have used this poverty line (or very similar poverty thresholds) to measure poverty in South Africa (Ardington *et al.* 2006; Hoogeveen & Özler 2006; Leibbrandt *et al.* 2006; Bhorat & van der Westhuizen 2008).[15]

In order to estimate the extent, depth and severity of poverty, we consider three different measures of per capita monthly household income: earned income only (measure I); earned income and social grant income (measure II); and earned income and social grant income, with household expenditure used as a proxy for income in zero-income households (measure III). The first measure of income identifies how poor individuals would have been had they relied only on the earnings of resident household members. The second measure helps highlight the poverty-reducing "effects" of social grant income. With the third measure of income, we offer some correction for the upward bias in poverty estimates created by incomplete information on all income sources.

expenditure in the lowest band. In 1999, 2004 and 2006, between 34.5 per cent and 41.5 per cent reported that their household expenditure was in the lowest band (R0-R399 total household monthly income). Income bands are constant across all three surveys.

[12] Across the four survey years, the real median difference between income and expenditure in households that report both income and expenditure information is positive and ranges from approximately R106 to R264.

[13] Often referred to as the 'poverty gap squared', the severity of poverty is less intuitive than the poverty headcount and the poverty gap. By squaring the proportionate shortfall from the poverty line, the severity of poverty (P_2) is an indicator that assigns a greater weight to the individuals farthest below the poverty line.

[14] Income measures were adjusted for inflation by using Statistics South Africa's consumer price index (yearly average) with 2000 as the base year.

[15] It is important to note that this study is concerned only with gendered trends in *income* poverty. There are several limitations to this approach. First, and as noted in Section 2, conventional poverty analyses, such as those conducted for this study, assume that income is shared evenly within households. Gender inequalities within households are therefore not captured by conventional poverty analyses using household survey data. Second, the OHSs and the GHSs (as well as most available data sources) do not capture information about time use and the gendered division of labour within households. The objective of this study is, therefore, to look at just one component of gender inequality (whether females are more likely than males to live in income-poor households) and how this has changed in the post-apartheid period.

4 Poverty analysis

4.1 Individual poverty estimates

To compare poverty rates by gender, we first estimate poverty at the level of the individual. Individuals are poor if they live in households where average per capita monthly household income is below the poverty line of R322 (2000 prices). Because poorer individuals live in larger households in South Africa, poverty measured at the individual level is considerably higher than poverty measured at the household level (described in Section 4.2 below). Table 2 reports headcount poverty rates ($\alpha = 0$) from 1997 to 2006, for the three measures of income. Within each year, poverty rates are lowered considerably as the measure of income becomes more comprehensive. In 1999, for example, 68.1 per cent of South Africans lived in earnings-poor households. With the receipt of social grant income, the headcount rate falls to 66.3 per cent; and when the income measure is augmented with data on household expenditure, the poverty rate declines further to 63.6 per cent.

Over the period 1997 to 2006, the poverty headcount decreased overall, but this fall masks an initial increase in poverty rates from 1997 to 1999. Poverty incidence then begins to decline between 1999 and 2004, with the decline most pronounced when both social grants (II) and household expenditure (III) are included as income sources (a significant decrease in the poverty headcount from 63.6 per cent to 61.6 per cent). From 2004 to 2006, there is a large and significant fall in poverty rates, driven particularly by the poverty-reducing "effects" of social grant income. In 2006, approximately 64.3 per cent of all South Africans would have been poor had they relied only on income earned from employment. With the inclusion of social transfers, however, the extent of poverty falls by five percentage points, to 59.1 per cent.

The overall trend of an initial rise in the extent of poverty (1997-1999) followed by a fall in poverty rates (in 2004 and 2006) is consistent with trends identified in the recent poverty literature in South Africa (Bhorat & Kanbur 2005; Leibbrandt *et al.* 2006; Meth 2006; Seekings 2007; Bhorat & van der Westhuizen 2008; van der Berg et al. 2008; Yu 2010). The actual poverty estimates that we present with the most comprehensive income measure (measure III in Table 2) are comparable to those identified by Ardington *et al.* (2006), who applied multiple imputation techniques to income data from the 1996 and 2001 Population Censuses to estimate income for households with missing and implausible income values. Employing this technique, they find that the poverty headcount increased from 59.8 per cent to 65.1 per cent between 1996 and 2001.[16]

In Table 2, we further disaggregate poverty rates by gender. In each year, poverty estimates are significantly and consistently higher for females than for males across all three measures of income. In 1999, for example, estimating the poverty headcount using income measure III, 61.3 per cent of males lived in poor households compared to 65.8 per cent of females. Trends in poverty rates disaggregated by gender show a similar pattern to the overall trend, of headcounts rising for both males and females from 1997 to 1999 and then falling particularly from 2004 to 2006. However, the data also suggest that gender differences in poverty widened over the decade. In 1997, using the most comprehensive measure of income, approximately 57.1 per cent of males lived in poor households compared to 61.8 percent of females (a difference of 4.7 percentage points). By 2006, poverty rates had fallen to 52.3 per cent among males, but only to 59.6 per cent among females (the absolute difference in poverty rates thus widened to 7.3 percentage points).[17]

A clear visual representation of gender differences in poverty rates and of the widening gender gap between 1997 and 2006 is provided in Figure 1. The figure describes a cumulative distribution function (CDF) of income (measure III) for males and for females living in households with average real per capita household monthly income of less than R1 000 per month (2000 prices) in 1997

[16] Ardington *et al.* (2006) use a poverty line of R340 in 2001 prices (which translates into R322 in 2000 prices).

[17] The difference in poverty rates, by gender, widened steadily throughout the period under review. While the absolute difference narrowed slightly between 1997 and 1999 (from 4.7 percentage points to 4.5 percentage points), it widened considerably by 2004 (6.3 percentage points) and by 2006 (7.3 percentage points).

and 2006, with the vertical line denoting the poverty line of R322.[18] In both 1997 and 2006, the CDF for males falls below that for females at any point in the income distribution (indicating first-order dominance).[19] Furthermore, the distance between the CDFs for male and female income is noticeably wider in 2006 than in 1997. The figure therefore shows that at any plausible poverty line (both above and below R322) the gap in real monthly incomes between males and females has widened over the period.

The poverty gap ratios presented in Table 3 suggest the contribution of social grant income particularly to reducing the depth of poverty. In 1997, for example, the poverty gap ratio drops from 0.53 on the basis of earned income only, to 0.44 with the inclusion of social grant income; and in 2006 it drops also from 0.53 but to 0.36. Furthermore, the table shows that although poverty gap ratios are consistently higher for females than for males, the receipt of grant income reduces particularly the depth of female poverty. Across all four years, the greatest absolute change in the poverty gap after including social grant income occurs among females. In 2006, for example, the poverty gap declines from 0.50 to 0.35 for males (a relative fall of 30 per cent), once grant income is included, but it drops from 0.56 to 0.38 for females (a decrease of 32.1 per cent).

Table 4 shows that, for both males and females, estimates of the severity of poverty (P_2) are in line with trends in the extent and depth of poverty from 1997 to 2006. The severity of poverty is significantly higher for females across all four years and decreases are relatively greater for males (21 per cent) than for females (15 per cent). According to the most comprehensive measure of income (III), then, the poverty headcount as well as the depth and severity of poverty decreased by more among males than among females from 1997 to 2006.

To explore further the contribution of social grant income to poverty alleviation, we decompose the FGT measures of poverty using the Shapley-value (Shorrocks 1982; Duclos & Araar 2006). This method makes it possible to identify the average marginal effect of different income components to poverty reduction while recognising the different distributions of income components across individuals. Rather than simply calculating a share composition of each income source, the Shapley-value measures the average marginal effect of including an income source over all possible combinations of income sources for the population (Duclos & Araar 2006). With the available data, we distinguish between three components of income: earned income; social grant income; and "other income" (based on expenditure data) accruing to households which received neither earnings nor grant income.

Table 5 reports the average marginal contributions of each income source to reducing the incidence, depth and severity of poverty in 1997 and 2006. Income from employment has the largest marginal effect on all three measures of poverty. From 1997 to 2006, the average relative contributions of earned income fell, however, while those from grant income increased. The role of grant income in poverty reduction derives particularly from its relative contribution to reducing the depth and severity of poverty. Over the period these average marginal effects increased. In 1997 and 2006, grant income reduced the poverty gap ratio by about 16 per cent and 26 per cent respectively (and lowered the severity of poverty by 20 per cent and 30 per cent). The table also highlights that grant income reduces the poverty rate, and particularly the depth and severity of poverty, by more among females than among males.

Overall, then, the data presented in this section suggest that females are more likely than males to live in households where average per capita monthly household income lies below a poverty line of R322 (2000 prices). Consistent with other studies, we find that poverty rates have fallen, particularly over the 2000's. We find further that the incidence of poverty has declined for both males and females but that the fall has been absolutely and relatively smaller for females. Consequently, over the period 1997 to 2006, gender differences in the incidence of poverty have widened slightly in favour of males.

[18] We have restricted the size of the population to aid the visual representation, but in so doing, the proportion of the population that is shown as being in poverty is higher than the national measures.

[19] First-order (stochastic) dominance occurs when the cumulative distribution functions of two populations are not equal to one another at any point in the distribution (in this case between R0 and R1000). In Figure 1, the distribution for males does not appear to cross the distribution for females at any point. Moreover, the distributions are farther apart near the poverty line (R322).

With the receipt of social grant income in households, the extent, depth and severity of poverty are significantly lower than they would have been had households relied only on income earned through employment. These transfers are effective particularly in narrowing gender differentials in the depth and severity of poverty. In other words, the real benefit of social grants has been in moving poor individuals and poor females in particular, closer to the poverty line. The implication of this finding is that social grants in South Africa appear to be relatively well targeted and have some impact on gendered poverty differences (even if the transfers are not enough to narrow the difference in poverty rates between males and females).

4.2 Poverty estimates at the household level

To investigate gender trends in poverty further, we compare the incidence and depth of poverty in female and male-headed households. Although the value of self-reported headship as an analytical category is contested (cf. Budlender 2005), evidence suggests that, in the majority of households in South Africa, household heads are also the main income providers. In the 1997 OHS, for example, approximately 83 per cent of all household heads earned or received the highest level of income in the household.[20] Poverty estimates by the gender of the household head therefore offer an opportunity to explore the nature and the implications of gender differences in access to resources.

Table 6 documents a steady increase from 1997 to 2006 in the number of households headed by women. This increase has been slightly larger than the rise in the number of households overall and consequently the proportion of all households which are female-headed grew modestly over the period, from 35.17 per cent to 37.48 per cent of all households.

In Table 7 we estimate the extent, depth and severity of income poverty using the most comprehensive measure of income (measure III), but now at the household level (households are poor if real average monthly per capita income in the household lies below the poverty line), and we distinguish among households headed by females and by males. Across all households, the incidence, depth and severity of poverty increased between 1997 and 1999 and then decreased in 2004 and particularly in 2006.

In all years, female-headed households are far more likely to be poor and to lie further from the poverty line than male-headed households (i.e. poverty gap ratios and estimates of the severity of poverty are higher for households with a female head). Furthermore, although the headcount and poverty gap ratios have fallen among both male-headed and female-headed households, the relative decreases have been larger among male-headed households. For example, from 1997 to 2006, the headcount rate fell from 38.8 to 32.5 per cent (a fall of 16.2 per cent) among male-headed households, but only from 66.7 to 62 per cent (a fall of seven per cent) among female-headed households.[21]

To compare the relative contributions of the different income sources to poverty reduction in female- and male-headed households, we again make use of the Shapley-value decomposition. In Table 8 we compare the average marginal contributions of earned income, grant income and other income received in "zero-income" households to poverty reduction in 1997 and 2006. In both female- and male-headed households, income from employment had the largest contribution to reducing the extent, depth and severity of poverty. However, based on the decompositions, earned income is relatively more important in male-headed households.

The marginal impact of grant income increased over the period: at the mean, the receipt of social grants reduced poverty rates in all households by six per cent in 1997 and 10 per cent in 2006. The table shows also that grant income is relatively more important in reducing the extent, depth and severity of poverty in female-headed households than in male-headed households. In

[20] Across all four surveys, between 76 per cent and 83 per cent of household heads earned or received the highest level of income in the household.

[21] Male-headed households experienced a greater absolute and relative increase in their poverty headcount between 1997 and 1999, but this was more than offset, once poverty rates began to decrease (in 2004 and again in 2006), by a larger absolute and relative fall in poverty incidence.

particular, the expansion of the social grant system has lessened the depth and severity of poverty by considerably more among female-headed households. In 2006, for example, social grant income lowered the poverty gap ratio by 35 per cent in female-headed households compared to only 15 per cent in male-headed households (and reduced the severity of poverty by 39 per cent among female-headed households and by 17 per cent among male-headed households). At the same time, however, the relative contribution of other income sources to the reduction of the depth and severity of poverty declined substantially in female-headed households that received neither income from employment nor from social grants. This may suggest that the receipt and value of remittances, particularly in households headed by women, has fallen over time.

The data presented in this section have demonstrated that poverty trends at the household level have also been gendered during the period under review. The poverty headcount, as well as the depth and severity of income poverty, have declined by relatively more among male-headed households than among female-headed households. The decomposition analysis has suggested that, while social grant income was not enough to erase the poverty gap between male- and female-headed households, this income was relatively more important in reducing the extent and particularly the depth and severity of poverty among female-headed households. Differences in the depth and severity of poverty between male- and female-headed households therefore would have been even greater without the receipt of social grant income.

4.3 The under-estimation of income

One of the concerns with poverty studies that make use of household survey data is that income may be under-estimated, and poverty therefore over-estimated, because all sources of income earned or received in households may not have been measured. In the four surveys analysed in this study, information consistently is collected on the individual receipt of earnings and social grants. However, this is not the case for other sources of non-labour income and income transfers. As we illustrated earlier in Table 1, this resulted in a significant percentage of "zero-income" households, or households in which neither earned income nor social grant income was reported. In our poverty analysis, we addressed this problem by using data on reported household expenditure to approximate income in households which do no report earnings or grant income. In this section, we test whether this simple correction is an effective means of reducing the underestimation of household income.

Of the four datasets analysed in this study, only the 1997 OHS collects detailed information on the value of individual sources of income other than earnings and social grants. For the purposes of comparability across the years, we did not include this information in the poverty estimates for 1997 reported in the previous section. Here, we generate a new measure of household income (measure IV) for 1997, which includes the value of remittances received as well as of private maintenance, work pensions, unemployment benefits and gratuities (as outlined earlier, these are sources of income that are not captured in the 1999 OHS or in the GHSs).

In Table 9 we present poverty statistics based on this new estimate of income and for ease of comparison, we repeat the statistics derived from the expenditure-augmented measure of household income (measure III) reported in earlier tables. The table shows that, although differences in poverty estimates based on the two measures of income are not large, both the incidence and depth of poverty are *lower* using measure III than measure IV, and particularly among male-headed households.[22] One possible explanation for this is that even in the 1997 OHS, comprehensive information is not collected on all sources of income including private pensions and rental income, and measure IV therefore continues to underestimate income.[23] These findings suggest that using household

[22] Among households which report information on both income and expenditure in 1997, the real median difference between per capita household monthly income and per capita monthly household expenditure is R138.23.The lower poverty estimates derived from measure III therefore are not likely to be caused by the overestimation of income from dissaving among households in 1997.

[23] We also assessed whether our poverty estimates would have changed significantly if we had first included these other sources of income in measuring income in 1997, and then augmented income with data on household expenditure

expenditure to augment measures of reported income may be an effective means of redressing the underestimation of income in household surveys where information on all sources of income is not captured.

5 Adjusting for household composition

Following both international (cf. Ravallion 1994) and South African (cf. Leibbrandt & Woolard 1999) best practice, we test whether our gendered poverty estimates are robust to adjustments for household composition. In particular, we adjust both the poverty line and household income by the number of adult equivalents and by scale economies in the household (see United Nations Statistics Division 2005).[24] In choosing the most appropriate values for the adult equivalence and scale economies adjustments for South African households, we follow May *et al.* (1995) and Leibbrandt and Woolard (1999), assuming a scale parameter of 0.9 and that children consume half the resources of adults, and like Leibbrandt and Woolard (1999), we define children as those aged 10 and younger.[25]

Table 10 compares per capita estimates (measure III) of the extent and depth of poverty with estimates adjusted for household composition in 2006. The comparison suggests that estimating poverty rates using equivalence measures makes very little difference to overall poverty statistics, a finding which mirrors those reported in Leibbrandt and Woolard (1999) and Woolard and Leibbrandt (2001).

In Table 11, we compare per capita and per adult equivalent trends in the extent of poverty using the most comprehensive measure of income (measure III). The table demonstrates that aggregate poverty trends and trends disaggregated by gender are not greatly affected by the use of an adult equivalence measure of income. Decreases in poverty rates among males and females are slightly greater when adjusting for household composition, but poverty rates among males continue to fall by absolutely and relatively more than poverty rates among females. Gendered trends in poverty are therefore robust to adult equivalent and economy of scale adjustments to household income.

6 Conclusion

This paper has used income data from regularly collected household surveys to investigate gendered trends in poverty over the post-apartheid period. The advantage of using these datasets is that they include information on earned income and social grant income at the individual level. We compared poverty rates when individuals and households relied only on earned income with estimates that include social grants in the measure of income. In order to address the possible underestimation of reported income in households that received neither earnings nor social grants, we also used household expenditure as a proxy for income. To compare the relative contributions of the different income sources to poverty reduction, we used a Shapley-value decomposition.

The results presented in the paper suggest that, first and foremost, income poverty remains a gendered phenomenon in post-apartheid South Africa. Across all four years and for each measure of income, the extent, depth and severity of poverty are significantly higher for females and for female-headed households. While the decline in overall poverty rates between 1997 and 2006 is encouraging, it masks differences in gendered poverty trends over the period. A greater fall in the extent, depth and severity of poverty among males and male-headed households has resulted in a

data. However we found very little difference with poverty estimates derived using measure III.

[24] We adjusted the R322 per capita monthly household income poverty line (2000 prices) for adult equivalence and economies of scale according to the method suggested by the United Nations Statistics Division (2005). We first identified a household of average size and composition in which per capita income equalled the unadjusted poverty line of R322. We then set the adjusted poverty line equal to household income adjusted for the number of adult equivalents and for the scale parameter.

[25] We therefore divide total household income not by the number of individuals but by $(A + 0.5K)^{.9}$, where A is the number of adults and K is the number of children in the household.

widening of the differences in poverty rates by gender. Particularly in the period during which declines in poverty have been greatest (2004-2006), the reduction in poverty has favoured males and male-headed households. From a gender perspective, however, the news is not all bad. Our findings suggest that the receipt of social grant income may have been relatively more effective in reducing particularly the depth and severity of poverty among females and among female-headed households. The gender differentials between females and males (and female- and male-headed households) living below the poverty line would therefore have been far greater without the contribution of social grant income, particularly in the 2000s.

References

[1] Araar, A & Duclos, J-Y, 2007. DASP: Distributive Analysis STATA Package. DASP Version 2.0, PEP, CIRPÉE and World Bank, Université Laval.

[2] Ardington, C, Lam, D, Leibbrandt, M & Welch, M, 2006. The sensitivity to key data imputations of recent estimates of income poverty and inequality in South Africa. Economic Modelling, 23, 822-835.

[3] Armstrong, P, Lekezwa, B & Siebrits, K, 2008. Poverty in South Africa: A profile based on recent household surveys. Stellenbosch Economic Working Papers: 04/08, Stellenbosch, University of Stellenbosch.

[4] Baden, S, 1999. Gender, governance and the 'feminisation of poverty'. Meeting on Women and Political Participation: 21st Century Challenges, Conference March 24-26, New Delhi, India.

[5] Bentley, K, 2004. Women's human rights and the feminisation of poverty in South Africa. Review of African Political Economy, 31(100), 247-261.

[6] Bhorat, H & Kanbur, R, 2005. Poverty and well-being in post-apartheid South Africa: An overview of data, outcomes and policy. DPRU Working Paper 05/101, Cape Town, Development Polic Research Unit, University of Cape Town.

[7] Bhorat, H, Naidoo, P & van der Westhuizen, C, 2006. Shifts in non-income welfare in South Africa: 1993-2004. DPRU Working Paper Series, Cape Town, Development Policy Research Unit-University of Cape Town.

[8] Bhorat, H & van der Westhuizen, C, 2008. Economic growth, poverty and inequality in South Africa: The first decade of democracy. Development Policy Research Unit Conference 2008- The Regulatory Environment and its Impact on the Nature and Level of Economic Growth and Development in South Africa, Conference Gauteng.

[9] Budlender, D, 1997. The Women's Budget. Agenda, 33, 37-42.

[10] Budlender, D, 2005. Women and Poverty. Agenda, 64, 30-36.

[11] Buvinic, M & Gupta, GR, 1997. Female-headed households and female-maintained families: Are they worth targetting to reduce poverty in developing countries? Economic Development and Cultural Change, 45(2), 259-280.

[12] Casale, D, 2004. What has the feminisation of the labour force 'bought' women in South Africa? Trends in labour force participation, employment and earnings, 1995-2001. DPRU Working Paper Series- No. 04/84, Cape Town, Development Policy Research Unit- University of Cape Town.

[13] Casale, D & Posel, D, 2002. The continued feminisation of the labour force in South Africa: An analysis of recent data and trends. The South African Journal of Economics, 70(1), 156-184.

[14] Casale, D & Posel, D, 2005. Women and the economy: How far have we come? Agenda, 64, 21-29.

[15] Chant, S, 2003. Dangerous equations? How female-headed households became the poorest of the poor: Causes, consequences and cautions. Gender Myths and Feminist Fables: Repositioning Gender in Development Policy and Practice, Conference July 2-4, Institute of Development Studies, Sussex.

[16] Chant, S, 2006. Rethinking the "feminization of poverty" in relation to aggregate gender indices. Journal of Human Development, 7(2), 201-220.

[17] Duclos, J-Y & Araar, A, 2006. Poverty and equity: Measurement, policy and estimation with DAD. CIRPÉE, Université Laval, Quebec.

[18] Foster, J, Greer, J & Thorbecke, E, 1984. A class of decomposable poverty measures. Econometrica, 52(3), 761-766.

[19] Hoogeveen, J & Özler, B, 2005. Not separate, not equal: Poverty and inequality in post-apartheid South Africa. William Davidson Institute Working Paper Number 739, Ann Arbor, William Davidson Institute, University of Michigan.

[20] Hoogeveen, J & Özler, B, 2006. Poverty and inequality in post-apartheid South Africa: 1995-2000. Bhorat, H & Kanbur, R Poverty and Policy in Post-Apartheid South Africa Cape Town HSRC Press 59-94.

[21] Lampietti, J & Stalker, L, 2000. Consumption expenditure and female poverty: A review of the evidence. Policy Research Report on Gender and Development Working Paper Series No. 11, Washington D.C., The World Bank.

[22] Leibbrandt, M, Levinsohn, J & McCrary, J, 2005. Incomes in South Africa since the fall of apartheid. NBER Working Paper 11384, Cambridge, Mass., National Bureau for Economic Research.

[23] Leibbrandt, M, Poswell, L, Naidoo, P & Welch, M, 2006. Measuring recent changes in South African inequality and poverty using 1996 and 2001 census data. Bhorat, H & Kanbur, R Poverty and Policy in Post-Apartheid South Africa Cape Town: HSRC Press 95-142.

[24] Leibbrandt, M & Woolard, I, 1999. Measuring Poverty in South Africa. DPRU Working Paper Series No. 99/33, Cape Town, Development Policy Research Unit- University of Cape Town.

[25] Leibbrandt, M & Woolard, I, 2001. Household incomes, poverty and inequality in a multivariate framework. Bhorat, H, Leibbrandt, M, Maziya, M, van der Berg, S & Woolard, I Fighting Poverty: Labour Markets and Inequality in South Africa Cape Town: UCT Press 41-73.

[26] May, J, Carter, M & Posel, D, 1995. The Composition and Persistence of Poverty in Rural South Africa: An Entitlements Approach. Land and Agriculture Policy Centre Policy Paper No. 15, Johannesburg,

[27] Meth, C, 2006. Income poverty in 2004: A second engagement with the van der Berg et al. figures. School of Development Studies Working Paper 47, Durban, School of Development Studies, University of KwaZulu-Natal.

[28] National Treasury, 2007. Intergovernmental Fiscal Review. Pretoria, National Treasury.

[29] Phalane, M, 2002. Globalisation, the feminisation of poverty and the masculine workplace: A South African perspective of the problem that spurs expansion but triggers inequality and identity crises. CODESRIA's 10th General Assemby, Conference 8-12 December, Kampala, Uganda.

[30] Posel, D, 1997. Counting the poor: who gets what in which households? Agenda, 33, 49-60.

[31] Posel, D, 2001. Who are the heads of household, what do they do, and is the concept of headship useful? An analysis of headship in South Africa. Development Southern Africa, 18(5), 651-670.

[32] Ravallion, M, 1994. Poverty Comparisons. Chur, Switzerland: Harwood Academic Publishers.

[33] Ray, R, 2000. Poverty and expenditure patterns of households in Pakistan and South Africa: A comparative study. Journal of International Development, 12, 241-256.

[34] Schatz, E & Ogunmefun, C, 2007. Caring and contributing: The role of older women in rural South African multi-generational households in the HIV/AIDS era. World Development, 35(8), 1390-1403.

[35] Seekings, J, 2007. Poverty and inequality after apartheid. CSSR Working Paper No. 200, Cape Town, Centre for Social Science Research- University of Cape Town.

[36] Shisana, O, Rice, K, Zungu, N & Zuma, K, 2010. Gender and poverty in South Africa in the era of HIV/AIDS: A quantitative study. Journal of Women's Health, 19(1), 39-46.

[37] Shorrocks, A, 1982. Inequality decomposition by factor components. Econometrica, 48, 613-625.

[38] Statistics South Africa, 2008. Income and Expenditure of Households 2005/6: Statistical Release PO100. Pretoria, Statistics South Africa.

[39] Taylor, V, 1997. Gender injustice: The macro picture. Agenda, 33, 9-25.

[40] Thurlow, J, 2006. Has trade liberalization in South Africa affected men and women differently? . DSGD Discussion Paper Series, Washington D.C. , International Food Policy Research Institute.

[41] UNDP, 1995. Human Development Report 1995. New York, Oxford University Press.

[42] United Nations Statistics Division, 2005. Handbook of Poverty Statistics: Concepts, Methods and Policy Use. New York: United Nations, Department of Economic and Social Affairs.

[43] van der Berg, S, Louw, M & Yu, D, 2008. Post-transition poverty trends based on an alternative data source. South African Journal of Economics, 76(1), 59-76.

[44] Woolard, I & Leibbrandt, M, 2001. Measuring poverty in South Africa. Bhorat, H, Leibbrandt, M, Maziya, M, van der Berg, S & Woolard, I Fighting Poverty: Labour Markets and Inequality in South Africa Cape Town: UCT Press 41-73.

[45] Yu, D, 2010. Poverty and inequality trends in South Africa using different survey data. Stellenbosch Economic Working Papers: 04/10, Stellenbosch, University of Stellenbosch.

Table 1: Zero-income households, 1997 – 2006

	OHS 1997	OHS 1999	GHS 2004	GHS 2006
	Zero earnings + zero social grants			
Number	6 972	6 273	4 449	4 031
Percentage	23.39	24.00	16.97	14.40
	Including household expenditure			
Number	566	1 033	350	167
Percentage	1.90	3.95	1.34	0.60
Real per capita monthly household income (2000 prices)	412.68 (19.89)	210.70 (4.57)	443.66 (10.63)	434.13 (12.18)

Source: Own calculations from the 1997 and 1999 OHSs and the 2004 and 2006 GHSs
Notes: Zero-income households are households that receive neither earnings nor social grants.
Real per capita income is only for zero-income households.
Data are weighted in the last row of the table
Standard errors are in brackets

Table 2: Poverty estimates for South Africa, 1997 – 2006 (per capita)

	Headcount ($\alpha = 0$)				
	OHS 1997	**OHS 1999**	**GHS 2004**	**GHS 2006**	**Relative change from 1997-2006**
	Earnings only (I)				
All	65.33	68.08*	68.87	64.26*	-1.64%
	(.006)	(.006)	(.007)	(.019)	
Male	62.73	65.61*	65.96	60.77*	-3.12%
	(.006)	(.006)	(.007)	(.019)	
Female	67.74	70.41*	71.69	67.67*	-0.10%
	(.006)	(.006)	(.007)	(.019)	
	Earnings + social grants (II)				
All	62.46	66.26*	65.25	59.07*	-5.43%
	(.006)	(.006)	(.007)	(.018)	
Male	59.97	63.94*	62.37*	55.70*	-7.12%
	(.006)	(.006)	(.007)	(.018)	
Female	64.78	68.43*	68.05	62.36*	-3.74%
	(.006)	(.006)	(.007)	(.018)	
	Including household expenditure (III)				
All	59.51	63.62*	61.60*	55.96*	-5.97%
	(.006)	(.006)	(.007)	(.020)	
Male	57.11	61.32*	58.40*	52.28*	-8.46%
	(.007)	(.007)	(.007)	(.020)	
Female	61.75	65.78*	64.70	59.55*	-3.56%
	(.007)	(.007)	(.007)	(.020)	

Source: Own calculations from the 1997 and 1999 OHSs and the 2004 and 2006 GHSs
* Denotes a significant change in the poverty estimate from the previous year at the 95% level of confidence. The data are weighted. Standard errors are in brackets. The poverty line is R322 per capita per month in 2000 prices. Household well-being is estimated as average per capita total household monthly income.

Table 3: The poverty gap, 1997 – 2006

Poverty Gap (α = 1)					
	OHS 1997	**OHS 1999**	**GHS 2004**	**GHS 2006**	**Relative change from 1997-2006**
Earnings only (I)					
All	.53	.56*	.58*	.53*	0.00%
	(.006)	(.006)	(.006)	(.019)	
Male	.50	.54*	.55	.50*	0.00%
	(.006)	(.006)	(.007)	(.019)	
Female	.55	.58*	.60*	.56*	0.02%
	(.006)	(.006)	(.007)	(.019)	
Earnings + social grants (II)					
All	.44	.49*	.42*	.36*	-18.18%
	(.005)	(.005)	(.005)	(.011)	
Male	.42	.47*	.41*	.35*	-16.67%
	(.005)	(.005)	(.005)	(.012)	
Female	.46	.50*	.43*	.38*	-17.39%
	(.005)	(.006)	(.005)	(.011)	
Including household expenditure (III)					
All	.36	.41*	.36*	.31*	-13.89%
	(.005)	(.005)	(.005)	(.013)	
Male	.34	.39*	.34*	.29*	-14.71%
	(.005)	(.005)	(.005)	(.013)	
Female	.37	.42*	.37*	.33*	-10.81%
	(.005)	(.005)	(.005)	(.013)	

Source: Own calculations from the 1997 and 1999 OHSs and the 2004 and 2006 GHSs
* Denotes a significant change in the poverty estimate from the previous year at the 95% level of confidence. The data are weighted. Standard errors are in brackets.

Table 4: Severity of poverty (P_2) by gender 1997-2006 (income measure III)

	OHS 1997	**OHS 1999**	**GHS 2004**	**GHS 2006**
All	.25	.30*	.25*	.21*
	(.004)	(.004)	(.004)	(.009)
Males	.24	.29*	.23*	.19*
	(.004)	(.004)	(.004)	(.009)
Females	.26	.31*	.26*	.22*
	(.004)	(.004)	(.004)	(.009)

Source: Own calculations from the 1997 and 1999 OHSs and the 2004 and 2006 GHSs
* Denotes a significant change in the poverty estimate from the previous year at the 95% level of confidence
Notes: The data are weighted
Standard errors in brackets
R322 per capita poverty line in 2000 prices
Household well-being is estimated as average per capita total household monthly income

Table 5: Relative contribution of income sources to reducing poverty

	All		Female		Male	
	1997	**2006**	**1997**	**2006**	**1997**	**2006**
			Headcount ratio (α = 0)			
Earned income	.88	.84	.86	.83	.88	.85
Grant income	.05	.09	.06	.10	.05	.08
Other income	.07	.07	.08	.07	.07	.07
Total	1.00	1.00	1.00	1.00	1.00	1.00
			Poverty gap ratio (α = 1)			
Earned income	.71	.66	.69	.64	.73	.68
Grant income	.16	.26	.17	.29	.15	.23
Other income	.13	.08	.14	.07	.12	.08
Total	1.00	1.00	1.00	1.00	1.00	1.00
			Severity of poverty (α = 2)			
Earned income	.66	.60	.63	.58	.68	.63
Grant income	.20	.31	.21	.34	.19	.28
Other income	.14	.09	.16	.08	.14	.09
Total	1.00	1.00	1.00	1.00	1.00	1.00

Source: Own calculations from the 1997 OHS and the 2006 GHS using the DASP module developed by Araar and Duclos (2007).
Notes: The data are weighted

Table 6: Male- and female-headed households, 1997 – 2006

	OHS 1997	**OHS 1999**	**GHS 2004**	**GHS 2006**
Male-headed	5 981 957	6 647 800	7 664 456	8 073 892
	(35 144)	(43 464)	(65 833)	(82 953)
Female-headed	3 244 538	3 735 295	4 520 349	4 858 648
	(25 996)	(35 973)	(49 458)	(57 856)
Percentage female-headed	35.17	35.96	37.07	37.48
	(.003)	(.003)	(.004)	(.004)

Source: Own calculations from the 1997 and 1999 OHSs and the 2004 and 2006 GHSs
The data are weighted. Standard errors in brackets.

Table 7: Poverty estimates among households (measure III), by household type, 1997 – 2006

	OHS 1997	OHS 1999	GHS 2004	GHS 2006	Relative change from 1997-2006
			Headcount (α = 0)		
All households	48.63	50.88*	48.23*	43.59*	-10.36%
	(.007)	(.006)	(.007)	(.018)	
Male-headed	38.84	41.69*	37.24*	32.54*	-16.22%
	(.007)	(.007)	(.007)	(.015)	
Female-headed	66.68	67.24*	66.88	61.98*	-7.05%
	(.008)	(.008)	(.008)	(.019)	
			Poverty gap (α = 1)		
All households	.28	.30*	.27*	.23*	-17.86%
	(.004)	(.004)	(.005)	(.010)	
Male-headed	.21	.24*	.20*	.16*	-23.81%
	(.004)	(.004)	(.004)	(.008)	
Female-headed	.40	.41*	.38*	.34*	15.00%
	(.005)	(.004)	(.006)	(.012)	
			Severity of poverty (α = 2)		
All households	.19	.22*	.18*	.15*	-21.05%
	(.003)	(.003)	(.003)	(.007)	
Male-headed	.14	.17*	.13*	.11*	-21.43%
	(.003)	(.003)	(.003)	(.006)	
Female-headed	.28	.30*	.27*	.23*	-17.86%
	(.004)	(.005)	(.005)	(.008)	

Source: Own calculations from the 1997 and 1999 OHSs and the 2004 and 2006 GHSs
* Denotes a significant change in the poverty estimate from the previous year at the 95% level of confidence. The data are weighted. Standard errors are in brackets.

Table 8. Relative contribution of income sources to reducing poverty

	All		Female-headed		Male-headed	
	1997	**2006**	**1997**	**2006**	**1997**	**2006**
Headcount ratio (α = 0)						
Earned income	.83	.80	.71	.72	.86	.83
Grant income	.06	.10	.12	.16	.05	.08
Other income	.11	.10	.17	.12	.09	.09
Total	1.00	1.00	1.00	1.00	1.00	1.00
Poverty gap ratio (α = 1)						
Earned income	.70	.67	.51	.52	.78	.74
Grant income	.14	.21	.24	.35	.11	.15
Other income	.16	.12	.25	.12	.11	.11
Total	1.00	1.00	1.00	1.00	1.00	1.00
Severity of poverty (α = 2)						
Earned income	.66	.63	.46	.48	.75	.71
Grant income	.17	.24	.26	.39	.12	.17
Other income	.17	.13	.28	.13	.13	.12
Total	1.00	1.00	1.00	1.00	1.00	1.00

Source: Own calculations from the 1997 OHS and the 2006 GHS using the DASP module developed by Araar and Duclos (2007).
Notes: The data are weighted

Table 9: Including other sources of income: Poverty estimates in 1997

	III	IV
	Headcount (P_0)	
All individuals	59.51	60.21
	(.006)	(.006)
Male	57.11	57.90
	(.007)	(.006)
Female	61.75	62.36
	(.006)	(.006)
All households	48.63	50.67*
	(.007)	(.006)
Male-headed	38.84	41.34*
	(.007)	(.006)
Female-headed	66.68	67.89
	(.008)	(.007)
	Poverty Gap (P_1)	
All individuals	.36	.38*
	(.005)	(.005)
Male	.34	.37*
	(.005)	(.005)
Female	.37	.40*
	(.005)	(.005)
All households	.28	.32*
	(.004)	(.004)
Male-headed	.21	.26*
	(.004)	(.005)
Female-headed	.40	.44*
	(.005)	(.006)

Source: Own calculations from the 1997 OHS

* Denotes a significant change in the poverty estimate from the preceding column. The data are weighted. Standard errors are in brackets. Measure III includes earned income and social grants, augmented with expenditure for zero-income households. Measure IV includes earned income and social grants plus remittance transfers, work pensions, private maintenance, unemployment benefits and gratuities.

Table 10: Per capita and per adult equivalent poverty estimates (measure III), 2006

	Per capita (z=R322)		Per adult equivalent (z=R417)	
	P_0	P_1	P_0	P_1
All	55.96	.31	55.13	.30
	(.020)	(.013)	(.019)	(.012)
Male	52.28	.29	51.83	.28
	(.020)	(.013)	(.019)	(.012)
Female	59.55	.33	58.35	.32
	(.020)	(.013)	(.020)	(.012)

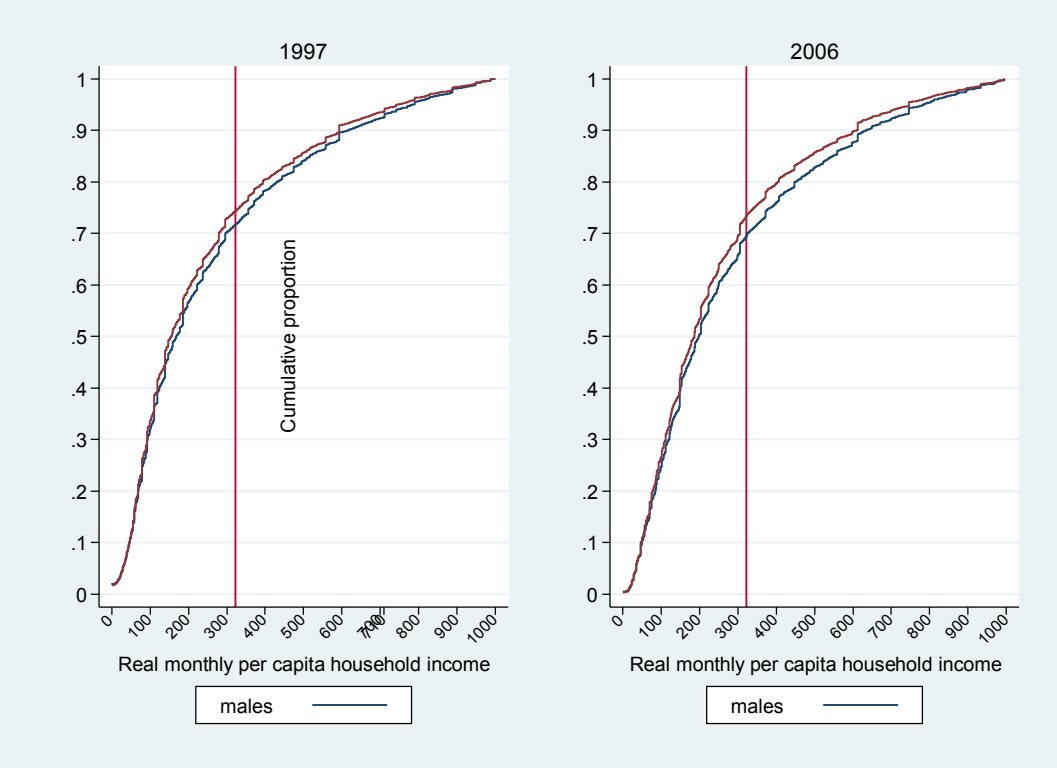
Source: Own calculations from the 2006 GHS
The data are weighted. Standard errors are in brackets. No per adult equivalent poverty estimates are significantly different from the per capita estimates.

Table 11: Per capita and per adult equivalent poverty trends

	Headcount (P_0)			
	OHS 1997	**OHS 1999**	**GHS 2004**	**GHS 2006**
	Measure III- per capita (z= R322)			
All	59.51	63.62*	61.60*	55.96*
	(.006)	(.006)	(.007)	(.020)
Male	57.11	61.32*	58.40*	52.28*
	(.007)	(.007)	(.007)	(.020)
Female	61.75	65.78*	64.70	59.55*
	(.007)	(.007)	(.007)	(.020)
	Measure III- per adult equivalent (z=R417)			
All	58.60	63.26*	60.86*	55.13*
	(.006)	(.006)	(.007)	(.019)
Male	56.37	61.04*	57.87*	51.83*
	(.007)	(.007)	(.007)	(.019)
Female	60.68	65.35*	63.74	58.35*
	(.006)	(.007)	(.007)	(.020)

Source: Own calculations from the 1997 and 1999 OHSs and the 2004 and 2006 GHSs
* Denotes a significant change in the poverty estimate from the previous year at the 95% level of confidence. The data are weighted. Standard errors are in brackets.

Figure 1: Cumulative distribution function of real monthly per capita household income by gender, 1997 and 2006



Source: Own calculations from the 1997 OHS and the 2006 GHS